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The MANAGEMENT REVIEW

September, 1929

Analyzing Marketing Costs

By W. F. COLEMAN, *Treasurer*
W. A. Jones Foundry & Machine Company

THIS PAPER was submitted in the Alvan T. Simonds Economic Awards Contest established by Alvan T. Simonds, President, Simonds Saw and Steel Company

SINCE the war such great strides have been made in manufacturing cost reduction that for the next few years it would appear that any great reduction in costs will be found in some other division than that of production. The most likely place seems to be in the distribution division, at least, general opinions and tendencies point this way. The cost of distribution per unit has in many cases increased, even though the dollar value has decreased, making the distribution cost in percentage of the sales dollar a large and rather alarming figure. It is this growing percentage that is our present problem.

Just as the production problem has been met so must we meet the distribution problem. For production there was no set path or open road to follow. Mass production and Systematic Management have been built up step by step. Analysis, time studies, research, associations, personnel work, in fact, all of the tools of management that could be found in any given industry have been used.

In this development many tools or branches of management have been applied, and some are still in use, that are entirely unsuited for the purpose for which they were intended. So many mis-applications have been made and so many inexperienced people have tried to use these tools that Efficiency Engineers or Systematizers are in bad repute generally.

However, the over-all production development of the country has been rapid and sound and with the marvelous progress of the machine tool industry in the past few years this development bids fair to continue for some

time to come. For those plants or industries who misinterpreted their problems and solutions, the production cost was high. For those who interpreted wisely the production cost was low. No doubt these industries have grown and prospered. These latter concerns went about their business as quietly as they could while the former ones bemoaned the rising costs of production.

So today we have many concerns who have made a real study of their distribution problems, have a research staff, make a comprehensive sales analysis and use all of the tools available for profitable distribution. These concerns who have been awake and who have found in a large measure the solution of their problem, are not complaining of distribution costs. Those, however, who have not made any real study of their own problem are setting up a constant clamor about rising sales or distribution costs. The thought we get from this is that just as we study and watch our problem so will our relative standing be in the low or high cost field.

For those who are troubled with distribution problems and wish to reduce these costs, there are two general ways.

The first—By effort of the individual plant or concern.

The second—By group effort or association work.

This latter method is having a large amount of success in formulating trade practices, in standardizing and simplifying sizes and kinds, and in meeting competition with kindred lines of endeavor.

This relief, however, is temporary. With conditions and practices within an industry or group stabilized, the amount of differentiation is lessened and the battle for sales becomes keener and upon narrowed grounds. During the formation period of an association many things can be accomplished, especially if production does not exceed demand. As a depression or dull period comes on, or as some of the group get out of balance, the nature of the human and the law of supply and demand soon bring the relative costs of distribution back to their starting point.

I do not decry this effort. It is good for human progress. I do believe, however, that the greatest results to be obtained in this decade will be made in individual establishments, stores, factories or in whatever single type of endeavor the reader might be engaged. The problem then as I see it is an individual one. Just as a firm properly uses the proper amount of the proper tools of distribution for their particular case, just so will the costs be small or large. The more proper all these values are, the nearer will the costs be a minimum and the reduction in distribution costs be the greatest possible.

My desire in this paper is to suggest methods by which individual distribution problems might be attacked. It is my belief that most of the marketing dollar has gone into channels because the individual has been solicited and talked into the expenditure rather than that the expenditure was made after research in finding the best media to obtain the most results at the least cost.

This is particularly true of advertising. Probably the greatest argument in selling advertising is to show what must be done to equal competitors' effort. To create thinking on this idea I am listing some of the most common motives for using advertising media.

Motives for Placing Advertising:

1. Solicitation by agency.
2. Offset competitors' advertisement.
3. To precede competitor.
4. To spend appropriation.
5. To see own idea in print.
6. To keep up publicity.
7. To introduce new article.
8. Following custom.
9. To make sales.
10. To get leads for personal calls.
11. To get specifications upon which to quote price and service.

True research would indicate what particular form or forms of effort would produce the best results. It would show how to find the prospects, what media influences the purchaser, what type of sales effort does the work easiest, what effect packaging and stocking has, also the effect of house policy in daily routine, etc.

To illustrate, a list of many factors which destroy sales follows:

- Poor merchandise
- Poor attention to inquiry
- Weak salesman
- Inadequate advertising
- Lack of diplomacy
- Poor judgment
- Fancied wrongs
- Mistakes in filling and billing orders
- Religious and political hatred
- Jealousy
- Reciprocity to others
- Incomplete service
- Not getting to deciding point
- Not knowing where business is
- Inability to show advantage to prospect
- Friendship to others
- Social and family connections with others
- Price not low enough
- Service not good enough
- Previous failure
- No knowledge of prospect or habits
- New purchasing agent wanting to change precedent
- Unfair sales tactics
- Failure to get message to prospect at proper time or often enough

Distance too great
Transportation too high
Transportation takes too long
Poor packing
Poor information about shipping
Indifference
Unscrupulous buyer
Some people you could never make a profit from—avoid them.

These things are for the most part intangible and very seldom can true data be secured. It is possible that in some firms many of the failures have been listed and tabulated and corrective measures taken, but for the most part it is safe to assume that they are matters of opinion.

In order that the reader may form a guide for research into his own problem I am listing several tables which deal with different angles of the marketing structure.

A. Forms of Selling:

1. Personal Calls
2. Catalogs
3. Advertising Novelties
4. Personal Letters
5. Form Letters
6. Circulars
7. Trade Papers
8. National Weeklies or Monthlies
9. Newspapers
10. Bill Boards
11. Posters
12. Electric Signs
13. Radio
14. Street Car Posters
15. Window Displays.

There has been no attempt to arrange them in order of importance or amount of money spent, merely a guide to add to or take away from for any particular case.

B. Whom We Sell To:

1. General Public
2. Women only
3. Men only
4. Children
5. Students
6. Professional Men
7. Wealthy People
8. Society People
9. Lovers of Sports
10. Home Owners

11. Purchasing Agents
12. Owners of Businesses
13. Managers
14. Superintendents
15. Engineers & Consultants
16. Wholesalers
17. Jobbers
18. Retailers

C. Our Clients' Relation to us:

1. Buy all requirements from us
2. Buy a large portion from us
3. Buy entirely on price
4. Buy occasionally
5. Know us but do not buy
6. Have heard of us
7. Never heard of us
8. Sore at us
9. Never have been solicited.

D. What We are Offering to the Prospect:

1. Price
2. Service
3. Quality
4. Savings from Use
5. Human Comfort
6. Human Safety
7. Increase of Production
8. Appearance
9. Utility
10. Investment
11. Deferred Payments

E. Buyer Buys On:

1. Price
2. Service
3. Quality
4. First Cost
5. True Cost
6. Maintenance
7. Location for Repairs
8. Delivery
9. Friendship
10. Lack of Knowledge When to Purchase
11. Treatment
12. Gratuity
13. Reciprocity
14. Political Favors
15. Reputation
16. Confidence

F. Indices for Locating Sales:

1. Population of towns
2. Bank clearances or deposits
3. Number of inhabitants per automobile
4. Values of savings per person
5. Value per square mile
6. Population per square mile
7. Number of hotel rooms
8. Post office clearances
9. Amount of power used
10. Number of telephones
11. Number of people passing a certain place per day
12. Every competitor of every existing customer is a likely prospect.

This can be extended many times to fit a particular need.

Many other classifications will no doubt immediately present themselves to the reader. However, for this paper, the above are sufficient.

The purpose of these listings is to take the distribution effort away from haphazard methods as much as possible. I do not believe that any exact rules can be laid down in our present state of marketing development, but I do believe that enough minor judgments can be made which added together give a more accurate solution than an over-all judgment of the problem.

Looking at table C (See page 295). If the nature of the product sold was No. 1. (Buy all requirements from us) sold to No. 11 of Chart B. (Purchasing Agents) or No. 5 of Chart E. (True Cost) it would not be good business to any of the forms of selling except 1, 2, 3, 4 and perhaps Purchasing Agents Magazine of No. 7. However, if you were selling scientific books your customers would be in an entirely different group and the selling methods would be distinctly different.

This in a way seems elementary, but when one looks in trade journals, magazines, at direct mailing literature, or interviews salesmen, it is very evident that but little attention was given to the task. One could visualize immediately the lack of knowledge on the part of somebody as to the impression to be made.

It is strange how much some concerns spend in advertising when just a rough study will show that upwards of 90 per cent of the business is repeat orders, secured by salesmen and the type of advertisement used never reaches the customer.

It is strange to look over a mailing list of a large concern and see the amount of poor or impossible prospects on the list and how many real prospects are omitted. It is even strange to find so many poor methods of finding names for mailing lists. One good way of getting new prospects, for a going concern, is to determine the industry of the customers and then find the competitors of the customers. Most likely they are all good prospects. If a

gravel pit is a purchaser of certain equipment it is almost an axiom that many other pits could use the same equipment.

Selection of type of salesmen particularly fitted for the industry is often overlooked. Most salesmen have only two methods of conveying their message, either by talking or writing. Very few of them are trained in effective speaking or writing and thus their message is half lost.

A table could very easily be prepared showing qualities necessary for the salesman. This is on the order of the Job Blue Print which is getting common in personnel work today.

I am listing a set that might be used :

Courtesy

Willingness

Pleasantness

Agreeableness

Confidence

Firmness

Honesty of Purpose

Knowledge of Goods

Tact

Judgment

Appearance

Expression by Speech or Writing

Morality—Most people respect and admire morality. A streak of goodness in everybody can be appealed to as well, or better, than their baser nature. Prohibition will win on a secret ballot but lose on an oral ballot.

Do your men rate well on the list you prepared?

While I have laid particular stress on Sales and Advertising, it must be borne in mind that the work of the financial, clerical, and producing departments oftentimes has as much bearing on marketing as the marketing division itself. Deliveries, credits, handling of correspondence and invoices, either help or retard the salesman and only constant strict watch of details spells success.

In all of the foregoing I have tried to suggest a means whereby any firm, from the smallest to the largest, could check its own procedure, list its own vital factors and remedy its own condition. Even a total marketing expenditure as low as three thousand dollars in a year could be studied over in a very short time and after careful consideration, no doubt with wiser expenditure greater results could be obtained. The millennium of course is the greatest distribution with the least cost. I am not advocating Research and Analytical departments for all concerns. Only as much of this type of work should be done as will make sales costs less. That amount has to be determined by the individual concerned.

I do believe, however, that any program for reducing distribution costs should take into account the reasons of rising costs for the plant in question. In the following I shall give my general views along this line.

We grant that money must be spent for distribution.

The way this money is used determines the effort given.

The value of the effort will depend upon whether it is wasted or used at all, whether it is efficient or inefficient and whether or not it is ample.

I believe, therefore, that use of effort can be classed as one of the leading causes for high distribution costs.

As a second cause I would take the changing environment and habits of the people.

It is useless to go against progress and human comfort. Attempts to revive bicycling and buggy riding have only met with failure. Attempts to make women use parts of clothing they have no need for only makes a high sales cost without much results. While these are rather outstanding cases the same is true more or less through all industry. The strongest trade association or bit of sales work individually cannot retard progress. It only adds to the distribution burden. The package must be changed to fit the need; it must make buying easier. The automobile is making a violent change in retail distribution. The country general store is losing ground. The small town and neighborhood stores of large cities are booming. The large department store is perhaps at its zenith today as the woman of the future will trade where she can drive her car and find parking space.

Instalment selling is another cause for increased costs. However, many energetic retailers have lessened sales resistance and increased volume to such an extent by this method that the over-all costs have been lowered.

Another cause of increased distribution costs is what I call stretching the point of service. This is best exemplified in the machine tool industry where it is common practice to send to several machine tool manufacturers prints or machines with guaranteed production, etc. In this way the best plan from the brains of the best men on that sort of work may be selected and at best only the actual time of designing where the machine is purchased need be paid for. The others can charge their time to distribution. Perhaps one of the greatest increases in sales burden is the increase in direct selling and advertising expenses.

Sales pressure does not increase the market. The market can be increased by development of new uses, by education as to use and by convenience of selling methods, but not by pure sales pressure. The amount that can be absorbed is really definite. To gain particular attention one firm will insert an advertisement in a new media. The competitors follow, the first concern goes to a larger spread, the others follow, then color is tried, and so on until all are spending more with the relative positions still the same.

Another selling practice that is being abused is the establishment of branches or agents. One firm, very successful in a territory, will set up a branch man and temporarily he will pay out. Soon the competitors look on this gain with alarm and several more follow suit. The result is that all the branches are more or less a failure.

Still another practice that is making higher sales costs is over-indulgence to salesmen and salesmanagers. Just as the production men were kings a few years back so are the salesmen today. Bad practices are in vogue now as then and it is not uncommon to see a salesman paid more for the last unit sold than for the average. This makes higher sales costs now just as higher production costs were made some years ago.

A heavy burden of the distribution division is the miscellaneous charges that grow on many firms through the acts of their executives. Pet hobby expense, charity, personal pleasures, which grow from year to year and are charged to distribution when they all belong to something else. The head can often nullify at a stroke the savings of his department.

No doubt many other causes could be listed, but the purpose of this paper is merely to strike enough high spots that will suggest avenues for thought for the reader, that he in turn either approving or disapproving of this effort will do something for the advancement of industry.

Summarizing

I believe that increasing distribution costs can be compared with increasing production costs of a decade ago, and that they are bothersome only to those who have not sufficiently studied their problem.

I believe that intensive study and right thinking and acting will lessen this problem, to those who have it, very rapidly in the years to come.

I also believe that the problem is of the individual rather than of the group character.

It seems to me that the engineering or scientific method is the best way of finding out what is to be done. I mean listing all of the known factors in the case. Then listing all the unknown. By making combinations and trials of the known we find the unknown. Under known would come all the statistics available, past performance, extent of market, costs of all operations, trends and such information as I have given in the tables.

Under unknown, what is wanted for accomplishment, profit percentages, expansion and other things of imagination and vision. Plans could then be made to accomplish the results desired.

In conclusion I say again, that the proper use of the proper amount of the best tools available for distribution will make costs the least and the reduction in distribution costs the greatest possible.

THE MANAGEMENT INDEX

Abstracts and News Items

GENERAL MANAGEMENT

Fair Play in Business

What is needed in business today is a way by which individual business men can afford to do what is right. How can business men be made free to be good?

Perhaps the answer lies in the strong tendency toward organization and concerted mass action in industry which has come into existence in the last 25 years. The way to an intense individualism and to an intense freedom to do right may be to create, as a foundation for it, a mass morality which would deprive men, by common consent, of freedom to indulge in wrong practices.

This, perhaps, is one of the more significant aspects of the present growth of all sorts of commercial organizations. Everybody more or less disarms, and the man who wants to discard his weapons and resort to policies of decency and fair play can do it safely. Only under such conditions can the individual follow his bent and act by the code of a gentleman. By Wainwright Evans. *Nation's Business*, August, 1929, p. 60:1.

Shall We Inbreed or Crossbreed for Managers?

To weigh the claims of those in the line of promotion against the possible necessity or desirability of introducing fresh blood, keeping in mind the best interests of the whole organization, is without doubt the hardest trial and test of generalship in business. It may be that the time honored

reluctancy to encroach upon the personnel of one's competitors is in the long run against the best interests of the community as a whole. It certainly tends to narrow and possibly to stereotype the market in personnel and, apart from outstanding exceptions, to keep the market price of management out of line with the stakes involved. Training for supreme responsibility is made difficult by what in theory may seem a minor consideration. Promotion within defined departmental spheres is not in itself difficult. But any loosening of the recognized lines of demarcation with a view to providing for particular persons a more ample opportunity for training in management may easily result in a suspicion of favoritism and an atmosphere of intrigue. By Sir Max J. Bonn. *Business*, August, 1929, p. 73:1.

Where Dangers Lurk in Mergers

The big department store is a much better bargainer than the small store. It can advertise more lavishly, it can browbeat manufacturers into giving better terms than they would give the small store, it can get better treatment from the banks than a small concern, and it can make use of larger quantities of very cheap labor. Yet there is one fact which goes far toward supporting the conclusion that large-scale merchandising is not real economy: In spite of all that has been done in the way of concentration through department stores, chain stores, and even chains of department

stores, the spread between what the producer gets and what the consumer pays has not been reduced one iota.

In manufacturing likewise unless we can point out with some particularity just where economies can be effected, or just what mechanical devices can be used by a large company which would not be possible with a small one, we will do well to go slowly in arriving at sweeping conclusions regarding the general economy of large-scale business. Both in manufacturing and in merchandising, the advantages of large scale bargaining have been an important factor in the concentration of industry.

With the diffusion of ownership and the danger of inviting attack from demagogues as safeguards against irresponsible management, there is no need to worry about concentration and mergers so long as they are in the interest of mechanical efficiency and real economy. The thing to guard against is that they do not abuse their superior bargaining power. By Thomas Nixon Carver. *Magazine of Business*, August, 1929, p. 126:3.

Will Nationalism Handicap Business?

An examination of the two conflicting forces which dominate the world of modern business, the competition of nationalism and the co-operation of internationalism, reveals the fact that nations are being forced more and more in sheer self-interest to temper their national policies to conform to those being followed by the rest of the world. From what has already transpired, America has learned the lesson that our stakes in Europe and the rest of the world are so great that it is necessary for us to protect what has already gone abroad and to exercise caution in regard to what is going to be sent abroad. Nationalistic tendencies which have recently been noted in the field of economics and finance are not to be taken too seriously. They are adopted as safeguards in the event of a crisis or distress. The apprehension on the part of some over the possibility of Europe's acquiring control of America's key industries also seems to be groundless. By Dr. Max Winkler. *The Magazine of Business*, July, 1929, p. 39:2.

FINANCIAL MANAGEMENT

Where the Call Money Comes From

The proportion of funds for speculative use which is being supplied by the banks has steadily declined, while the proportion contributed by "others" has constantly grown. By far the greater part of the loans by "others" is being supplied by corporations and individuals. Investment trusts have been especially large loaners.

A controversy has developed as to whether it is ethical for corporations to loan their surplus funds for stock market purposes. The investment of these funds in the money market has been attractive not only because of the satisfactory profits derived, but also because of the safe character of the investment, since the loans are secured by highly liquid Stock Ex-

change collateral. In addition, this investment is one that can be realized upon at any time; it is more liquid than government securities or even than the majority of marketable securities.

Treasurers and comptrollers of several large concerns which are now loaning money through the banks feel very strongly that they are not only justified in following this course, but that they would be decidedly lax in their duties as financial officers if they did not employ surplus funds to the best advantage. Those who refrain from making loans as a matter of principle agree with the banker that loaning money is a function which should be left to the banks.

From examination of the balance sheets of 275 leading corporations, it was found

that 117 companies had considerable surplus cash. Of these 117 companies, 9 do not invest surplus cash at all; 21 invest surplus in government securities only; 44 concerns invest in marketable as well as government securities; 43 loan money on call, as well as investing in marketable and government securities. By H. G. Parker. *American Bankers Association Journal*, August, 1929, p. 102:5.

How to Analyze a Financial Statement

In determining the moral hazard involved in underwriting fire insurance, the financial condition of the concern must first be ascertained, since the concern will have no motive for starting a fire if its financial condition is sound. The customary method of determining the financial condition of a company is by the analysis of its financial statement. Following are some of the steps in this analysis: Whether the quick assets are sufficient to pay the current liabilities is determined by a comparison of cash and accounts, and notes receivable with the current liabilities; the total liabilities of a firm must not exceed the amount of capital actually used in the business (total capital less real estate); the annual turnover of capital invested is determined by annual sales volume, and whether the concern is undertrading or overtrading by a comparison of the capital turnover with the average turnover in that particular line of business; whether the accounts receivable are good or past due is ascertained by comparing sales with outstanding accounts. Following the analysis of the statement, the ability of the concern to pay its matured liabilities is determined by the trade investigation. An address by G. H. Phillips of the New York Board of Fire Underwriters, 1929, 7 pages.

Impaired Barometers

Although the data of business activity are more complete, more accurate, and more quickly available than ever before, the problem of general forecasting has not

been lessened. With each gain in statistical information, the industrial and financial structure has become more elaborate and business relationships more complicated. Obviously, a parallel growth in skill and understanding is required of those who would be analysts and prophets. Rule-of-thumb formulas have broken down as an outcome of revolutionary changes in business.

Among the business indicators which have lost much of their forecasting value are bank clearings and other credit data, commodity price trends, carloadings, statistics of employment, wholesale and retail sales, pig-iron production, and volume of production, the last-named losing much of its significance because of the rapid rise of new industries for which we have not as yet complete data. The consumption of electric power as a new index will not have exact meaning until the period of substitution of purchased electricity for power hitherto locally produced and therefore unreported is over, or nearly so.

Mechanical forecasting has failed, but interpretative forecasting, which takes into account economic changes, can still use to advantage the old-time indicators. This method of forecasting calls for a new type of expert, and a more persistent examination of the current data of business which are found in the dependable journals. By C. T. Murchison. *Barron's*, August 12, 1929, p. 3:2.

A Bank's Experiment in Granting Small Loans

The publication of the first year's experience of the National City Bank of New York City with its Personal Loan Plan brings out some interesting facts: Loans aggregating \$16,529,805 were granted to 51,203 borrowers. An analysis of data in the possession of the bank indicates that the average borrower is thirty-four years of age, is earning \$2,755 a year, has been steadily employed in his present connection for more than five years, is married and has one child. Loans averaged

\$320 in amount, and about 5 per cent of the borrowers repaid their loans before the expiration of the year allowed.

Approximately 87 per cent of the applications for loans were granted. More than 97 per cent of the borrowers fulfilled their obligations in the matter of regular repayment deposits, and in less than one per cent of the cases was it necessary for the bank to take legal action in order to effect collection of loans.

The success of the National City Bank experiment is likely to have wide-spread effect. Employers who have granted small loans to employees from company and personal funds will probably welcome an opportunity to regularize this procedure by transferring the transaction to a local bank. *The Service Letter on Industrial Relations*, July 5, 1929, p. 3:2.

Capital Facilities—Accounting Principles and Methods

Any comprehensive plan for the proper accounting of capital facilities should include the following:

1. A set of standards by which it is possible to determine what is and what is not a proper charge to capital facilities.

2. A standard procedure in connection with the acquirement, recordation, transference, and disposal of capital facilities.

3. Detailed instructions as to what expenditures are proper cost charges to capital facilities.

4. A standard classification of property accounts for general ledger and property ledger purposes.

5. A comprehensive and well designed form for recording complete information with respect to each separate unit of plant property and a well planned arrangement for filing these records.

6. An effective accounting control between the general ledger, property ledger, and property cards,—and a physical control of properties through the individual property cards or records.

The discussion of the results obtainable from an efficient and properly operated property record, and the description of the information which should be included in such a record are especially timely. A distinction is made between property ledger and property records. By Frederic W. Kilduff. *N. A. C. A. Bulletin*, July 15, 1929, p. 1363:11.

OFFICE MANAGEMENT

Organization: *Job Analysis, Employment, Pay, Tests*

Written Tests of Honesty (Integrity)

One of the generally accepted indications of lack of honesty, or integrity, is changing a written record in a way believed by the person making the change to be to his advantage. Making changes in a written record for personal advantage does not necessarily indicate other types of dishonesty but is such a flagrant violation of a generally accepted social standard of honesty as to mark the person who does it as "dishonest" in the eyes of most persons.

Dr. J. E. Bathurst has devised a written test which, without the testee's knowledge,

measures the extent to which he, with varying incentives and varying supervision, changes a written record in a manner he believes to be to his advantage. The test, which can be given in twenty minutes, has been tried out on approximately a thousand persons of varying ages and social status. A summary of the data obtained from the tests given leads to the following conclusions:

To a surprising degree testees are willing to change a written record, this willingness is affected by incentive and supervision in somewhat the same way as other forms of dishonesty are generally thought to be

affected, and the extent to which these factors affect willingness to change a written record is probably as great as the effect of these same factors upon other forms of dishonesty. A relationship between willingness to change a written record and other forms of dishonesty is indicated. *Public Personnel Studies*, July, 1929, p. 98:9.

Le Paiement Par Chèque Des Salaires En Europe

In Europe, the payment of salaries by check is much less general than in the United States. In Germany the law stipulates that wages of workers in factories and industrial concerns must be paid in cash. The method of paying employees in commercial concerns is not specified by law, but in actual practice only higher executives are paid by check. In England payment by check is not prohibited; in consequence, monthly salaries are frequently paid by check. In the case of weekly wages, the payment is always in cash. Payment by check is rare in Belgium and in Italy. Cash

is the only legal medium of payment for the employees of manufacturing concerns in Switzerland. The law does not stipulate the method of payment for employees of other types of concerns, but, with the exception of the salaries of the higher executives, payment of wages by check is rare. In France, because of the legal complications, payment in cash is the rule. Only higher salaried employees, for the most part those of banks, are paid by any other method; these are regularly paid by deposit to their account.

In conclusion, the advantages and disadvantages of payment by check are briefly outlined. For the employer, the payment of salaries by check does not affect an appreciable saving of time. The only real advantage of this form of payment, so far as he is concerned, is that keeping a large sum of money on hand is avoided. On the other hand, the employees must cash their pay checks, which entails a loss of time on their part. By Pierre Jolly. *Mon Bureau*, July, 1929, p. 317:2.

Administration: Regulations, Supplies, Communications

Improving Follow-up Letters

The purpose of the follow-up is to induce action on the part of the prospect, not to express peevishness on the part of the writer at failure to secure response. Good letters do not badger the prospect about replying, or express surprise, dismay, or astonishment at the fact that the reader has not seen fit to answer. A good letter should ask the reader to take the action desired, and to do so should be made easy for him by enclosing the necessary reply card or order blank. Mention of previous letters and of the fact that the reader has not replied should be omitted. It is one particular appeal, or the sum of a number of different appeals which brings about the desired response. By E. W. Husen. *Postage & The Mailbag*, July, 1929, p. 640:1.

Standardizing Office Practice in Laundries

A standard of practice in the laundry office will be found just as valuable in the small establishment as in the larger one. A suggested outline of the points to be embodied in such an office manual include organization, policy, personnel, duties of position, instructions for performance of work, and special consideration. The last point will cover those matters which cannot be handled by routine and which must come up for executive consideration. In order to make sure that they come to the attention of the proper party, the manual should contain instructions, as well as illustrations, of those matters on which the management reserves decision. By Walter F. Brauns. *Bulletin*, Laundryowners National Association of the United States

and Canada and the American Institute of Laundering, August, 1929, p. 5:2.

On Naming Things

If every letter would name the specific product with which the letter is concerned, a manufacturer's products would be kept much more effectively before his customers and prospects. Most dictators

use general language that would fit any possible situation under the sun, instead of using the specific terms that will apply only to the one situation they are writing about; as for instance, material, products, goods, items, propositions, matters, devices, orders, action, and requirements. By Anne Boone. *Postage & The Mailbag*, July, 1929, p. 651:2.

Training and Education: *Schools, Libraries, Employee Publications*

Building and Conducting the Training Program

There are three methods presented of carrying on public-contact training. Under the first method the training program is planned and conducted entirely by the training department, or, in a smaller organization, by the staff employee who is responsible for training activities. The second method is one in which the training program is carried on by the supervisors and executives of the various departments in which training is carried on, while the training department or staff training man co-operates with the line organization and functionally directs the training activities.

In the third method the training program is planned by the training department or staff training man with the assistance of the department supervisors and executives, but is conducted in the initial training period by the training staff man, with subsequent follow-up and retraining handled by the department with the assistance and advice of the staff training man.

The advantages and disadvantages of these three methods are discussed on the basis of the experience of those who have used one of these methods. *Serial Report of the Industrial Relations Committee*, National Electric Light Association. July, 1929, 12 pages.

Records: *Forms, Charts, Cards, Files, Statistics*

New Developments in Order Handling Methods

The steady increase in drop shipments and the insistent demand from purchasers for prompt deliveries has secured the establishment of systems for handling orders that reduce the possibility of error to a minimum, and insure merchandise being shipped in time to arrive when it is wanted. The practice among the majority of firms is to simplify the handling of orders by requiring as few written additions as possible and discounting as much checking of orders as can be eliminated. Such operations are found to be the two greatest sources of errors and they also

delay the progress of the order through the house.

An efficient order system should furnish a record of the purchaser's name and address and give complete shipping instructions. It must give an accurate list of all items ordered. It must furnish a sufficient number of copies for each department interested in the transaction. It must expedite the posting of an order to the purchaser's account. It must necessitate as few written additions as possible, and a minimum of clerical help. It must also take care of the preparation of invoices and the writing of labels, tags, or other shipping material, and it should furnish records for the statistical and production departments. Report No. 298. *The Dartnell Corporation*, 25 pages.

PRODUCTION MANAGEMENT

Plant: Location, Lighting, Heating, Ventilation

Make Your Plant Clean-up Pay You a Profit

It took a sprained ankle and the injured feelings of the manager to start a clean-up system in a certain large manufacturing plant. His first investigation covered only the space between two buildings, but he found stored here a large mixed-up accumulation of materials. Then he found that the rest of the plant was in a similar condition. His idea had been that money could be saved by allowing scrap to accumulate outside the buildings and then getting a dealer to make a flat price for the entire lot. But as the scrap materials were often piled on top of spare

machinery parts, castings, and surplus materials, these things were gathered along with the scrap and sold. A simple cleaning system was installed as a result of this investigation which had the effect of bringing in a large profit from the reclamation and sale of scrap materials, as well as of keeping the plant orderly at all times.

Since most plants do more or less reclaiming of used materials, the waste is due to the lack of real instructions regarding the disposal of the material. In one plant the clean-up is conducted as a contest between the various departments and suitable prizes are awarded the leaders. By Edw. W. McCarthy. *Management*, August, 1929, p. 60:5.

Industrial Economics: Labor and Capital, Legislation, Wage Theory, Immigration

Leisure for Labor

Mass production made possible by electric power and developments in technical processes has yielded a 47 per cent increase in production at a decrease of 24½ per cent per unit prime cost. Prime cost reflects efficiency in production and lower costs of materials. If the products of mass production are to find buyers the most numerous groups of the population—wage-earners—must have incomes that permit them to buy and leisure in which to use. It was this development that disclosed to industries the significance of wage earners' incomes as an element in consumers' demand.

The five-day week is a standard in keeping with technical achievement, synchronizing social progress with industrial progress. Our technical advancement will find its highest opportunity in turning toil into creative work and in turning physical drudgery into exultant mastery of the forces of production. The five-day week is

surely a way to higher levels of living for every one. By William Green. *Magazine of Business*, August, 1929, p. 136:2.

Unemployment and Old Age Destitution

The undesirable tendency of industry to limit its hiring to workers under 45 years of age means that those who for any reason become unemployed in the early forties find great difficulty in securing new positions. Companies are disinclined to hire older workers who will not have qualified for pensions when the 65-year age period has been reached. The present increased idleness among older workers is caused partly by the current tendency to mergers among industrial companies, leading to a cutting down of positions and elimination of duplication in jobs and in plants, and partly by increased mechanization of process, eliminating hand work. Then too, in certain industries a faster rate of working speed puts a premium on youthful vigor, and

paradoxically, such excellent measures as workmen's compensation insurance, group insurance, and private pension plans militate against the interests of older workers by increasing the expense of such protection where the working staff is heavily weighted with workers in the older age groups.

Much is being done in the better organized industrial concerns to alleviate unemployment among persons of the 40 to 60-year-old group, but the community as a

whole must take a hand if the problem is to be met in a thorough-going fashion. An adequate system of public employment exchanges throughout the country, more accurate statistics on the volume of idleness, a definite general policy of unemployment compensation, and a public system of old-age pensions are the required remedies which have been agreed to among progressive economists and business men for the last twenty years. By Ordway Tead. *The Survey*, Aug. 15, 1929, p. 562:2.

Employee Service: *Hygiene, Recreation, Lunch Rooms, Stores, Safety*

Accidents of Older Workers: Relation of Age to Extent of Disability

In a study of the cases of 4,828 workmen who sustained industrial accidents, a high correlation was found to exist between age and duration of disability for all injuries except burns and scalds. The evidence is that the older an injured person is the longer, in general, will be the period of the resultant disability. By Albert Frederick Stevens, Jr. *Personnel Journal*, August, 1929, p. 138:8.

Co-operation of Entire Personnel Necessary for Plant Safety

Production without safety is poor economics. Prevention of accidents and consequent injuries should begin with the planning and layout of the foundry buildings and yard, installation of equipment, laying out of the various molding floors, paths by which production will travel through the various departments, cleaning and shipping departments, and other operations. Too much stress has been laid upon the part that the workman has in the prevention of accidents. Management must assume responsibility for safety in the industrial establishment. Regarding the training of workmen in accident prevention, the problem resolves itself down to the simple proposition of a proper exercise of authority and an enlightened leadership. If

the foreman of the department and his assistants are given information regarding the payment of accident compensations in such form that they realize what failure to be safe is costing the department, and supervisors of all grades are held to strict accountability, progress in accident prevention will result. By F. H. Elam. *Iron Trade Review*, August 1, 1929, p. 256:2.

Is Your Plant Sitting on Packing Boxes?

There are two important facts to be considered in regard to posture: First, the ordinary chair seldom fits its occupant, and second, the average individual makes little effort to assume the proper sitting position. Incorrect seat height causes the occupant's legs to extend unnaturally or to hang. In the first case the weight of the body is not evenly distributed, and in the second case the edge of the chair retards circulation in the legs. Such conditions of course induce fatigue, and impair the efficiency of the worker.

Twenty-four chairs of an improved type were installed at the Higgin Manufacturing Co. with the result that production soon showed an increase of approximately 10 per cent. In the inspection of the finished product at the Gillette Safety Razor Co. all blades pass in turn through three separate groups of inspectors. After a

thorough trial, 212 adjustable chairs were purchased for this department where the work is very exacting. The effect of correct posture was immediately noticeable as

practically no defective blades were discovered after the second inspection. By John R. Armstrong. *Industrial Power*, August, 1929, p. 62:4.

Training and Education: Schools, Libraries, Apprenticeship, Employee Publications, Bulletin Boards

Universal Apprenticeship Essential

It must not be forgotten that there are important and extensive industries that do not readily lend themselves to mass production methods. Such products will continue for years to be built as individual units rather than by thousands along an assembly line and, hence, in those industries, the all around mechanic will continue to hold his own.

Investigations have shown that about five per cent of the industrial workers in the United States must be replaced every year. Since the ordinary apprentice training course extends over a period of several years, 15 to 20 per cent of the total number of skilled mechanics should be constantly in training as apprentices in order to supply the needs of industry. Fairness demands that apprenticeship should be extended to very industrial district and to practically every manufacturer. Although certain manufacturers now train many more apprentices than they themselves need, it is utterly impossible for them to train all that are required, even if they were willing to do so. By Harold S. Falk. *The Iron Age*, July 25, 1929, p. 203:4.

Apprentices Trained Four Years

The present training program for machinist apprentices at the Laidlaw Works of the Worthington Pump & Machinery Corporation covers a total of 9,984 working hours. The learners are under the direct supervision of an instructor whose duties are to teach them how to operate machine tools, to submit weekly apprentice reports to the educational director, and to co-operate with department fore-

men in obtaining the most satisfactory results. Foremen are not expected to spend their time with beginners.

The related training department is operated by the company. The instructors are employees occupying responsible positions with the company who are certified by the Ohio State Department of Education and receive compensation from the State and from the company, one-half from each. Classes in this department are held after regular work hours.

The success of the original plan led to increasing the number of apprentices so that the program now calls for twenty-four, six to graduate each year. The ratio of machinists to apprentices is approximately ten to one. The ratio of pattern makers to apprentices is about five to one. These quotas were arrived at by (a) making a survey of the machines that apprentices could operate within the child labor laws; (b) considering the number of department employees and of machine shop mechanics; (c) studying the possibility of utilizing services of apprentices in slack periods to insure carrying out the company's policy of continuous employment throughout the four years of apprenticeship.

Favorable publicity given the program by the employees and by the apprentices themselves have overcome the original difficulty experienced in getting applications for the courses. Now employees get their own sons and close friends to take advantage of the training offered. The vocational department of the Cincinnati public schools has been the greatest source of supply. The enlarged program now in force includes a junior student engineers' course, which is confined to high school graduates technically inclined and to young men

who have been compelled, on account of conditions beyond their control, to discontinue their technical training at college. The object of the course is to develop men

for positions beyond the ability of the apprentices, such as sales, engineering, and road work. By John F. Biehl. *The Iron Age*, August 8, 1929, p. 333:4.

Employment: *Classification, Selection, Tests, Turnover*

The Grades of Labor—A Key for Job Classification and Appraisal

An equitable and convenient plan applicable to any industrial organization for the establishing of initial wage rates and the determining of promotional increments for all grades of service has been worked out by Mr. J. O. Hopwood at the Philadelphia Electric Company. The problem is approached from the co-operative point of view, considering the entire organization as a unity and its human functions as made up of the positions or jobs of its individual members. A scale for appraising both the job status and the rate range is presented. By weighting related positions with key positions and interpolating them between each other, the jobs throughout the entire system are brought into harmonious alignment and service of the same grade is equalized in all departments.

A table is arranged to illustrate a possible grading of positions in a series of functional classes. A parallelism between the service grades and the mental grades is shown. A second figure showing how the subdivisional groupings of positions

together with lines of authority and responsibility can be worked out by organization charting is presented. By J. O. Hopwood. *Personnel Journal*, August, 1929, p. 114:11.

Could You Quit If You Wanted To?

Few businesses can lose money more rapidly than a personal service concern. The logical, indeed practically the only, people who will buy such a business are those who have been associated in it with a successful manager. Realizing that in order to get a good price for his industrial engineering and accounting business, it was essential that his associates have confidence that as a group they would be able to carry it on successfully, Mr. William R. Basset spent ten years in selecting, training, watching, and testing men who seemed to hold promise of being able to run the business. When he was ready to enter the investment banking field, there was in the concern that he had built up a group of men, fully competent to carry on the business, who were glad to buy out his interests. By William R. Basset. *Nation's Business*, August, 1929, p. 28:4.

Benefit Systems and Incentives: *Group Insurance, Pensions, Vacations, Profit Sharing, Wage Plans, Suggestions, Stock Ownership*

Two Weeks War on Waste

About 35 per cent of the suggestions sent in by employees of the Oakland Motor Company in a campaign to eliminate waste were found to be valuable. It is estimated that the annual savings which will result from these suggestions will amount to \$542,000. The suggestion that won the first prize was a plan to use Philfuel for the block test of motors in place of gasoline

or city gas. This suggestion contained full details as to the cost of installing the equipment necessary for the use of this gaseous fuel. The estimate showed a saving of 6½ cents per motor tested, or \$2,597 per month based on production of 1,600 motors per day. The cost of the equipment required was placed at \$32,943, which would be amortized in about 12½ months. *Iron Age*, August 1, 1929, p. 263:3.

Pensions

A brief summary is presented of the most significant developments in the pension movement which would have any direct influence upon the decision of an individual employer who is considering the adoption of a retirement plan for his employees. Sufficient data is given to enable an executive to grasp its fundamental aspects. The principal phases of the subject covered are: Relation of company pension systems to problems of old age dependency, public pension systems, trade union pension systems, purposes of company pension plans; types of retirement plans for employees, typical provisions of pension plans, factors affecting establishment of pension plans. Department of Manu-

facture, Chamber of Commerce of the United States. July, 1929. 54 pages.

General Electric Bonus

The General Electric Company recently paid \$1,825,832 in supplementary compensation to its factory and office employees who have been in the service of the company for five years or longer. This is the largest bonus ever paid by the company and represents 5 per cent of the earnings of employees for the six months ending June 30. During the past five and one-half years the company has paid a total of \$15,757,722 in supplementary compensation to its employees, under this bonus plan. *Industry*, August 17, 1929.

Shop Organization: *Planning, Methods, Job Analysis, Standardization, Waste*

Build to Handle

Factories once built resemble in their unsusceptibility of change nothing quite so much as the ancient laws of the Medes and Persians. Can you change your building? No. It wasn't built that way. But you can look about for better ways to handle your product. An overhead conveyor may be best suited to handle the product under existing conditions. It will pay for itself in two years. All right, then, an overhead conveyor it is. But it's also another brick added to the too firm foundation of the popular misconception that mechanical handling is chiefly useful in overcoming mistakes in plant geography.

When new buildings come, they should be planned for the changes which must inevitably take place as the years go on. Whatever kind of job you were doing, your new plant must take into account the job you will be doing in the future. If it is planned around your handling system with ample provision for what that system will be in years to come—if it is planned for change—you need never think of mechanical handling as a way to overcome

mistakes in plant geography. There won't be any mistakes. By Frank D. Chase. *Factory and Industrial Management*, August, 1929, p. 299:2.

Systematic Network of Conveyors Speeds Refrigerator Output

Castings were produced for the last time on July 12, 1928, at the Erie, Pennsylvania, works of the General Electric Company. By October the gray iron foundry had become a modernly equipped plant for the fabrication of all-steel refrigerator cabinets on a large scale. Efficiency in routing various refrigerator parts after they have been processed by the respective machines is outstanding in the Erie plant. Main production and assembly lines run parallel and lengthwise of the plant. Sub-assembly lines, some parallel and others at right angles to the central arteries, play an important role in acquiring mass production. Material handling equipment used in this systematic network includes cranes, belts, overhead chains which travel continuously along a monorail and carry refrigerator parts through the spray booths

and electric drying furnaces, slat conveyors of both wood and steel, and roller units which due to inclined position allow the progress of the cabinets to continue either by gravity or by handpower. By E. J. Ross and H. B. Veith. *Iron Trade Review*, August 1, 1929, p. 251:5.

Speed in Process

With a job made up of about 99 per cent handling, the Milk Dealers' Bottle Exchange of Chicago required 180 people for the work in the old plant. In the new plant two miles of conveyor and over \$20,000 worth of lift platforms make it possible for 80 employees to handle over four times as many bottles. Eleven parallel gravity conveyor lines with switches make a veritable switching yard, like that used by railroad companies in the handling of freight. Practically all the storage there is in the plant takes place on this "trackage." It serves as a reservoir to even out the flow of bottles which is continuous beyond this point. Through the medium of two alligator-tail switches, the eleven gravity lines are reduced to two, and these in turn, to one by a third switch remotely controlled by the operator of the first two switches. This single line then fans out again to four parallel lines of conveyor, two for quart-size bottles, one for pints, and one for the half-pint creams. These are live-roll conveyors and take the bottles to the washing machines. The plant operated for one year without the switch yard. Its installation did away with the services of twelve men and eight electric lift trucks. By Ernest Reuter. *Factory and Industrial Management*, August, 1929, p. 283:4.

18 Machine Tools Are Eliminated by the Design of a Single Unit

To eliminate waste in producing the ball on the radius rod yoke of the Model A car, engineers at the Detroit plant of the Ford Motor Company worked out a process and designed a special machine based on the principle of finishing a round part to size by rolling pressure. The machine; which

turns out a job that is finished to within 0.001 or 0.002 inch, eliminates scrap, and saves labor; consists of two principal parts, round forgings resembling deep dish pans, that face each other somewhat like old-time millstones. The lower one revolves and the top one is stationary. The bottom forging is a rolling die. The rough ball passes through a gradually narrowing groove or channel until it is reduced to the proper size for the finished ball. Burnishing and sizing are performed in the die, and the ball emerges at completion of the cycle, smoothly polished and finished. *Iron Trade Review*, August 8, 1929, p. 322:1

Obsolescence—Is It a Cure for Over-Production?

Figures recently published in financial periodicals show that factories are not operating at 100 per cent of their capacities and that inventories are relatively large. Obsolescence, by which may be understood the unexpected and unforeseen manifestations of unknown and invisible forces intrusively nullifying the worth or value of existing plants as distinguished from the consumption of that worth or value by wear or their physical deterioration caused by use, is one of the causes of such conditions. It will exist and work as long as human beings have reasoning powers. It will contribute to high costs in manufacturing and deplete profits in all business where things of value are used until research laboratories cease to function and mankind is wholly satisfied with things as they are. It is the price of progress, the living cost of business. Viewed in that light, its return of profits on its cost, even after subtracting its enforced losses, is immeasurable. It will reduce the cost of production and continue to increase profits as long as improvement in methods, scientific discoveries, and new inventions keep human beings partially dissatisfied. It is a spur to the inventor, an accelerator to the operator, and a condiment to the consumer.

Protection by withholding profits to pro-

vide for replacements, and further protection by withholding more profits to provide for contingency of obsolescence, is just as important for continued business life as are the duties imposed in custom houses. Plant investment is nothing more than deferred operating costs, awaiting a chance to find its way as a part of the cost of the products issuing from the plant. Without the protection of adequate reserves, obsolescence may be as destructive as a disastrous fire. With such reserves providing the means of accepting and taking advantage of opportunities, it may be as profitable as the discovery of the Comstock Lode. By John V. Montague. *Connecticut Industry*, August, 1929, p. 9:3.

Mechanical Handling Brings Lower Unit Costs

The manufacturers must learn to sell materials handling service, not just equipment. The device or equipment of itself may be ever so excellent, mechanically, electrically, and otherwise, and yet to be totally inadequate to serve the true economic purpose for a given set of conditions. The user is interested in knowing whether a given piece of equipment will produce certain definite results. Will it reduce his costs? Can it be purchased and installed at a definite cost to him? Can it be maintained, if used within the limits and range of the equipment, at a definite cost? If it can be demonstrated to a prospective purchaser that he can save \$60,000 a year by an investment of \$30,000 or \$35,000, as has proved to be the case in numerous instances, a matter of \$5,000 or more in the first cost is not likely vitally to influence the sale of this particular installation providing the fundamental economics have been worked out and the conclusions are sound. By Harold Vinton Coes. *Factory and Industrial Management*, August, 1929, p. 277:2.

Modern Speed Reducers Pay

An efficient type of speed reducer unit incorporated in the power drives for materials handling equipment invariably effects

a substantial saving in power beside conserving space, facilitating and cheapening installation, reducing maintenance expenses, and providing insurance against accident. The speed reducers now available as standardized units may conveniently be grouped in half a dozen classes: worm gear, mill type, herringbone and helical gears, spur-gear, planetary and non-planetary units. All of these are compact units, requiring little room for their accommodation, are safe and, being totally enclosed, are virtually dirt and dust proof. Each type, when properly designed and constructed, is highly efficient and in cost is apt to be less expensive than the margin between the cost of low and high-speed motors of like power capacity. The selection of the best type for an individual installation is a task entailing full knowledge of local conditions and requirements, as well as more or less familiarity with the various types available. By Reginald Trautschold. *Materials Handling and Distribution*, August, 1929, p. 42:4.

Keeping Maintenance Costs Low by Efficient Lubrication

The importance of effective lubrication, which is the salient factor in the maintenance of continued efficient operation with a minimum of expense for upkeep and repair, is often overlooked by plant operatives in the general rush of present-day production demands. The primary factors in maintaining effective lubrication on materials handling and distributing equipment are: The care which has been given to the original selection of the lubricant to meet the constructional conditions and means of lubrication employed; the means of application and distribution of the lubricant to the wearing parts; the means provided for protection of lubricants in storage and handling; the operating conditions involved; such as pressure, temperature fluctuation, and presence of water or chemicals.

In the selection of lubricants for such machinery, the characteristics which should be given particular attention are: The

viscosity, pour test, carbon residue content, and flash point, in the case of oils; and the melting point solubility, and consistency, where greases are being studied. The purpose and technique of each of these tests is presented. By Allen F. Brewer. *Materials Handling and Distribution*, August, 1929, p. 41:2.

Filling the Cookie Jar

The success of the mechanical-handling system has greatly aided the new plant of the Southern Biscuit Company in doing the job for which it was designed. When it was decided to build a new plant for the manufacture of some 100-odd kinds of products, Mr. Wade H. Adams, Vice-President and General Manager, made up his mind to profit by the mistakes other manufacturers in the same line of business had made in the past. To that end he visited biscuit plants all along the eastern seaboard, from New Orleans to Portland, Maine, and in the Middle West. An attempt was made to embody in the new plant as many of the new devices and equipment for handling as were known about.

Of the system installed, Mr. Adams says, "Much of the success is due to the experience gained, not only from our own years of manufacturing, but also from those of many another plant manager. And we are by no means through with improving the system, even though it does its job well now. There are few places in a factory where reside greater possibilities for savings. All of us know the value of mechanical handling equipment but, when one stops to consider the vast number of manufacturing plants, few of us really know how to use it.

"Some plant managers consider that mechanical handling, to be efficient, must necessarily be complicated. That has not been our experience. When you lay out your plant for mechanical handling get the simplest installations you can which will do the work. Make your handling system a co-ordinated whole. And don't crowd it. Give it plenty of room in which to operate. Then, if your judgment and choice have been good, it will do the job for which it was designed." By Wade H. Adams. *Factory and Industrial Management*, August, 1929, p. 286:3.

MARKETING MANAGEMENT

Keeping the Sales and Production Departments Friendly

The tendency of the sales department is to want new and unique things constantly in order to hold the interest of the customer. On the other hand, the tendency of the manufacturing department is to retain articles as long as possible in order to avoid confusion in the manufacturing schedule and to keep costs down. Therefore, it is necessary to bring about a coordination of activities between these groups. It is this consideration that has caused the establishment in the Holeproof Hosiery Company of a separate section of the sales departments, headed by a man familiar with manufacturing conditions. He is in a position to protect the company against sales "brain storms" and also the "can't be

done" of the factory. He analyzes sales suggestions from the standpoint of the manufacturing possibilities before they are recommended to the manufacturing department and also analyzes new developments in the manufacturing department before he passes them on to the sales department. An organization such as this to protect one's product is expensive to maintain, but it is less expensive in the long run than to produce products which are wrong from the consumer's standpoint. By James B. Melick. *Printers' Ink*, Aug. 8, 1929, p. 80:3.

How Do Fashions Get That Way?

Fashion changes, like business changes, come and go slowly, not overnight. They are logical and reasonable, related and con-

nected. They extend over long periods, and overlap each other. They are best studied together for they influence each other, but they can be forecast and charted in advance. It is surprising how few people study fashions and fashion trends, how many use hit and miss methods. If fashion were of little importance, there might be more excuse for the disregard of fashion facts, but fashion is of the very greatest importance; it sells one thing and stops the sale of another. The storekeeper who knows what the fashions are and what they will be next season can buy into the trends. He can buy the quantity of each that he will sell and not have to take the heavy losses that often result from guesswork in buying and selling fashion goods. By Amos Parrish. *Nation's Business*, August, 1929, p. 32:4.

Twenty-one Ways a Research Man Tackles a Sales Problem

This is the way a research man goes to work: 1. Gathers and charts total sales along various lines. 2. Breaks sales down by products or kinds; 3. Obtains the cost of sales over a similar period; 4. Analyzes profits earned to determine sources; 5. Puts the microscope on consumer relations; 6. Analyzes service methods in different offices; 7. Finds out what prospects think of products; 8. Finds out what users think of products; 9. Establishes a satisfactory sales report system; 10. Starts a modern, current sales record system; 11. Finds out what sales force knows about products; 12. Learns how prospects are found and selects best ways; 13. Compiles the best sales ideas of successful men; 14. Determines the best means for customer follow-up; 15. Studies sales methods of best salesmen; 16. Analyzes compensation plans for the men on the sales force; 17. Makes a comprehensive study of competition; 18. Catalogues forms of advertising and sales promotions; 19. Makes sound suggestions for all forms of publicity; 20. Ap-

plies knowledge of sales organization in other industries; 21. Studies the problems of distribution and notes trends. By Bennett L. Moore. *Sales Management*, August 3, 1929, p. 185:4.

How Many Questionnaire Replies Give an Accurate Answer?

There are four principal factors that must be considered in determining how many replies are needed to a market survey question. Although it is impossible to fix a figure as the minimum percentage of replies which will insure an accurate answer, by analyzing the investigation before it is begun and by checking the replies as they come in, an accurate answer can be obtained at a minimum of time and expense. Such an analysis necessitates taking into consideration these facts: the scope of the investigation; influential factors; quantitative and qualitative data; dependent questions. The great danger in investigations is in trying to get too many details instead of being satisfied with a short questionnaire which will get the really important facts. Fewer questions usually necessitate fewer replies and the accuracy of these replies can be proved by adequately checking for recurrent trends. By Stanley I. Clark. *Printers' Ink*, July 18, 1929.

The Credit Manager

In the opinion of Justin H. Edgerton, the newly elected president of the National Association of Credit Men, at least 98 per cent of the general public is inherently honest and losses from credit accounts can easily be held to less than one-half of 1 per cent of the total volume of business done by any store, provided proper credit methods are employed.

Where careful examination has been made before credit is granted and where the charge account department is run efficiently, a store can afford to do as much as 75 per cent of its business in charge accounts. *Retail Ledger*, First July Issue, 1929, p. 4:1.

What 40,000,000,000 Sales Have Taught Us

The public demands with its merchandise, economy, quality, guarantees, generosity, convenience, speed, style—in short, miracles of merchandising. To executives of the Woolworth Company there is very little mystery in this particular kind of commercial miracle. It is accomplished by continual alertness, thorough investigation, watching trends, economy, simplicity, profits

multiplied fast for the manufacturer and for the Company, growing volume swelling with expansion of the chain, by watching trends of mass demands, or even by creating mass demands through being the first to furnish, voluntarily, greater values than consumers yet know how to ask for. The working of commercial miracles—every executive's future job—is made more sure by practice in accomplishing miracles. By H. T. Parson. *Magazine of Business*, August, 1929, p. 148:4.

Sales Promotion: Letters, House Organs, Advertising

Strange Interludes in Advertising

A careful selection of the advertising agency in the first place and patience in working out problems together will prevent many advertising interludes. Many a new advertiser joins the procession of quick shifters because almost immediately after he signs up with an agency he wants to see his brain child in print. Another reason for the shifting of accounts is that the advertiser never thoroughly sold his associates and superiors. In well managed businesses, executives are not shifted for petty reasons. An advertising agency should be considered the manufacturer's advertising executive staff, and so long as the connection is satisfactory there is no more reason for dropping it than for discarding tried and tested machinery. By Roy Dickinson. *Printers' Ink*, August 1, 1929, p. 80:4.

Why We Believe an Advertising Budget Does More Than Save Money

The Troy Laundry Machinery Company installed a budgetary control of advertising expenditures at the beginning of 1929, which has been a success from the start. The advertising manager believes that if properly made the budget of advertising expenditures is not merely a compilation of figures, but becomes the most valuable tool he has. Its primary benefit is the change it causes in the advertising manager's thinking. With it he becomes year-minded, not moment-

minded. The Troy Laundry Machinery Company's budget has twelve classifications: advertising agency, artwork and photos, catalogs, conventions, demonstrations, electros and engravings, express and postage, dealer helps and miscellaneous, printed matter, publications, subscriptions, and travel. A monthly statement sheet is shown, giving the total expenditures for the month and indicating the relationship of all expenditures to the budget. By Richard L. Denman. *Class & Industrial Marketing*, August, 1929, p. 30:2.

Teamwork Between the Salesman and the Sales Promotion: How to Plan It

To coordinate printed and personal selling one manufacturer first analyzed his market carefully and determined who were the real prospects. These were grouped according to the best traveling routes. He estimated how long it would take a salesman to work each town on a certain route. With this reduced to days he had the salesman's first month's trip planned, and the group automatically became the first month's list to which the sales promotion literature was sent. Prospects were then mailed a series of sales promotion pieces according to a schedule, with the salesman always following the series immediately after it had been sent to a specific group. Various other plans are described which

achieve the required coordination between sales promotion and selling. By F. W. Bond. *Sales Management*, July 27, 1929, p. 151:2.

And Now About Your Selling

In a previous issue some of the questions were considered which might be asked by the advertising man trying to inform himself about a certain product. In this article

some of the sales information is considered which the advertising manager or sales executive may wish to have when starting work on a product which is new to him. Ninety questions are listed, which together with the one hundred and eleven in the previous issue form a basis upon which to conduct an investigation of any product. By Ray Giles. *Advertising & Selling*, July 24, 1929, p. 17:3.

Buying, Receiving, Storing, Shipping

And Now the Skyscraper Garage!

A skyscraper for the relief of traffic congestion has recently been erected in New York City. From the time a car is driven in at one side until it is driven out at the other human hands do not touch it. An outstanding feature is a mechanical contrivance known as the Kent electric parker. The motorist drives into the garage, and parks his car head on in front of the elevator door, and the floor man provides him with a claim check. All cars are put in position by means of guide rails upon which the parker runs and which hold the wheels of the machine straight. In calling for the machine, the process is reversed.

Keeping streets clear of all parked vehicles represents the last desperate attempt, in the minds of many experts, to meet the traffic congestion. *The Texaco Star*, July-August, 1929, p. 2:2.

Hand-to-Mouth Buying and the Inventory Situation

The retailer first resorted to the hand-to-mouth method of buying as a measure of protection following the crisis of 1920. But the continuation of this method until the present time with no apparent indications of a change is regarded as a phenomenon in business practices, the results of which are encountered in practically all phases of economic activity. It has been dependent upon three factors: style change, a slightly declining price level, and the development of a rapid, dependable transportation system.

A fourth factor is the increasing development of scientific business methods.

At the present time the retailer benefits most from hand-to-mouth buying because he has been able to adjust its application to his needs. By George A. Gade. Robert Morris Associates, 1929. 32 pages.

Some Dangers of Seeing Salesmen by Appointment Only

The "interview by appointment" policy can very easily become a boomerang. Any system which reduces the number of salesmen admitted has as its chief disadvantage the danger of overlooking desirable lines or products. A salesman representing a small or never-heard-of-before manufacturer may come along with the very thing wanted or a new and most desirable line. Of course, sound merchandising prescribes that a merchant inspect many lines for the sake of centering upon a more or less limited number, with little duplication. One pronounced weakness in retailing today is that the average store offers too many items in each specific classification. Buyers can remedy this situation by applying the principle of selectivity.

The function of the buyer is to receive salesmen. The fact that there are salesmen makes his job possible. When he turns away salesmen whom he has the time to see, he should be considered as much a slacker as the salesman who fails to call upon his full quota of prospects each day. Both are wasting time that belongs to their

employers. By Jas. H. Warburton. *Printers' Ink*, Aug. 1, 1929, p. 97:4.

Preliminary Study Shows Large Profits From Industrial Traffic Management

Twenty-two firms submitting questionnaires in the industrial traffic management survey of the Transportation Division, Bureau of Foreign and Domestic Commerce, reported an average return of 345 per cent on their investment in traffic ad-

ministration. One tire factory reported a return of 2,250 per cent on its investment in a department to watch such matters as overcharge, loss and damage claims, rate adjustments, pooling orders, consolidating l.c.l. shipments into carload lots, and making special contracts with warehouse, cartage, and steamship companies. While this was the outstanding instance, several large firms reported returns of 500 per cent or better. *Domestic Commerce*, August 12, 1929, p. 73:1.

Salesmen: Selection, Training, Compensation

Can the Boss Learn from the Salesman Who Fails?

When a salesman fails there are four possible deductions: 1. the product is not right; 2. marketing conditions are not right; 3. the man's working conditions are not right; 4. the man himself is no good. This shows that 75 per cent of the fault lies with the employer.

The loss of a salesman often means an actual cash loss of \$500 to \$1,000 spent in training and equipping him for his job. It often means a further loss of several thousand dollars' worth of sales while the salesman's successor becomes familiar with the territory. One sales manager made a point of investigating those industries which attracted most men away from his own. By this means he accumulated valuable data about salaries paid in a number of industries, the working conditions in each, and so on. By Philip E. Spane. *Marketing*, August 3, 1929, p. 56:2.

Building a Model Territory as a Sales Example

The Petroleum Heat & Power Co. wished to give some tangible proof to their field force of the basic soundness of the idea that the harder the sales force works the better it works, and that resultant sales will mount increasingly as salesmen learn to work more and better. They, therefore, built up a model territory in Stamford. Two

sales managers, one for the desk and one for the field, were put in charge of seven salesmen. The idea of work as the basis of sales was laid before this group. The result of the experiment is that the preaching which is so much a part of sales management is largely eliminated. The company is now able to show exactly what can be done under certain conditions with an ideal organization plan. At present, this model force is outselling every other one of the other districts. By W. C. McTarnahan. *Printers' Ink Monthly*, August, 1929, p. 29:2.

Plan for Getting Customers to Suggest Possible Salesmen

One of the major problems of sales managers is the cutting down of turnover among salesmen. A number of leading business concerns have found the practice of asking their satisfied customers to recommend men an effective one, since the customer is usually interested in the future success of the company. The National Life Insurance Company has prepared a folder which it mails to a selected list of policyholders. This carries a friendly message and asks for the names of men whom the policyholder feels will reflect the high standards required of a representative of the company. Another concern which has found such a plan satisfactory is the New York Life Insurance Company. A nationally known paint company is using a similar

scheme and a leading cement manufacturer has also found the idea worth-while. *Dartnell Sales Data*, August 17, 1929. 1 page.

Graduated Commissions Spur Salesmen

The strictly commission system for automobile salesmen is well established in the automotive industry. But whether it really does spur on the salesman to his best effort is a question. The Reo Motor Car Co. has found that it does not, and so they are now paying their men a flat salary that is bolstered by a plan of graduated commissions. This latter plan acts as a sort of watch-dog for the flat salary. The scale of graduated commissions paid monthly provides a bonus of 1 per cent on a volume of \$1,001; 2 per cent on a volume of \$2,001; 3 per cent on a volume of \$3,001; 4 per cent on a volume of \$4,001; 5 per cent on a volume of \$5,001 and above. By W. A. B. Hanchett. *Printers' Ink Monthly*, August, 1929, p. 62:2.

How Twenty Companies Handle Auto Expenses

A canvass of practices in sixty leading concerns operating salesmen's cars shows that about half of them follow the plan of a flat mileage allowance and about half pay all expenses on the basis of an itemized report. Low operating costs based on carefully compiled itemized statements by a number of companies operating good-sized fleets indicate that firms allowing a flat seven to ten cents a mile might find they were able to trim costs at this point. The companies contributing their experiences are the Kraft-Phenix Cheese Corporation, Armour & Company, Brownstein-Louis, Oshkosh Overall, Ford Roofing Products, Baker Ice Machine, Denison Manufacturing, Graton & Knight, Fuller & Johnson Manufacturing, Graybar Electric, Crown Cork & Seal, Nunn, Bush & Weldon Shoe, Oliver Farm Equipment, Sweet Candy, National Carbon, Gulf Fertilizer, Clay Equipment Corporation, Butler Manufacturing, Ballard & Ballard and Spencer Heater. *Sales Management*, July 27, 1929, p. 148:3.

Intelligent Direction of Sales Will Stop Growth of Sales Costs

In the long run it does not pay anyone to sell a man something he cannot use economically, and the higher the price of the product the more damage is done by such a sale. However, a salesman, no matter how honest and capable, unless his efforts are directed, will be certain to make an increasing number of sales of this character as he finds himself swept into the rut of trying to circumvent his competitor. The White Motor Company has always made a point of knowing what its salesmen are doing, what calls they are making, and how closely they are adhering to the fixed and definite purposes of its products. Through the modernization of their field organization the company has set up a two-way flow of information,—from the plant to the salesman, and from the latter to the management. Salesmen invariably try to do too much in the way of getting information for a prospect, and not in a sufficiently direct manner. Closer contact with the men in the field has made it possible to refer to the proper department problems which the men had been trying to solve for themselves. By Walter C. White. *Printers' Ink*, August 1, 1929, p. 3:5.

Salesmanship

Why Psychology Has Failed in Sales

It is beginning to be understood that there is a great difference between the psychology of advertising and the psychology of sales, a fact which explains the paradox of success and failure in these two fields. There is nothing in the situation under which advertising is read which tends to cause anything but normal emotional reactions on the part of the individual. In personal selling, however, one is dealing with unusual emotional states which border closely on the abnormal. The typical customer is more critical than usual, more easily offended than ordinary, less sure of his decisions. His psychology is more like that of a crowd than of a normal individual. His height-

ened feeling of personal importance causes him to expect more by way of service than can profitably be provided if sales costs are kept down. By Donald A. Laird. *Printers' Ink Monthly*, August, 1929, p. 44: 3.

The Three Divine Gifts of Salesmanship

The first of these divine gifts which predestines success or failure as a salesman is the power of forceful speech. This is not to be confused with elocution or a degree in business English, but is just a natural desire for talk. The other two gifts

are the power of amplification and nerve. If an applicant for a sales position in the Minneapolis-Honeywell Regulator Company passes the two major qualifications, that is, power of forceful speech and enthusiastic amplification he is enrolled for training and his selling nerve is tested in the field. Accompanied by an experienced field manager, the recruit is asked to make difficult approaches under trying conditions. His reactions determine the kind of territory which is allotted to him. By James Maratta, *Printers' Ink*, July 25, 1929, p. 3:3.

Books Received

Federal and State Control of Water Power. Compiled by Julia E. Johnsen. H. W. Wilson Co., New York, 1928. 186 pages. 90 cents.

Real Estate Financing. By Nelson L. North, De Witt Van Bureau and C. Elliott Smith. Prentice-Hall, Inc., New York, 1928. 630 pages. \$6.00.

Patent Law for the Inventor and Executive. By H. A. Toulmin, Jr. Harper & Bros., New York, 1928. 288 pages. \$4.00.

Safety and Production. A report by the American Engineering Council. Harper & Bros., New York, 1928. 414 pages. \$5.00.

A Financial History of the American Automobile Industry. By Lawrence H. Seltzer, Ph.D. Houghton Mifflin, Boston, 1928. 297 pages. \$3.00.

The History of Trade-Union Organization in Canada. By Harold A. Logan. University of Chicago Press, Chicago, 1928. 427 pages. \$4.00.

Intelligence Tests. By Walter Fenno Dearborn. Houghton Mifflin, Boston, 1928. 336 pages.

What You Should Know About Health and Disease. By Howard W. Haggard. Harper & Bros., New York, 1927. 538 pages. \$5.00.

Principles and Exercises in Accounting. By Nathaniel Filfus. Globe Book Company, New York, 1928. 193 pages. \$1.60.

Government Ownership and Operation of Railroads. By Walter M. W. Splawn. Macmillan Company, New York, 1928. 478 pages. \$5.00.

Fundamentals of Bookkeeping and Accounting. By Nathaniel Filfus and Nathaniel Robinson. Oxford Book Company, New York, 1928. 230 pages.

The Triumphant Machine. By R. M. Fox. Hogarth Press, London, 1928. 148 pages. 5 shillings.

The Economic Problems of Europe. By M. Philips Price. Macmillan Company, New York, 1928. 218 pages. \$3.50.

Principles of Inland Transportation. By Stuart Daggett. Harper & Bros., New York, 1928. 705 pages. \$4.00.

Keeping Fit by Easy Exercises. By George Thomas Everett. Ronald Press, New York, 1928. 100 pages. \$2.00.

The American Merchant Marine Problem. National Industrial Conference Board, New York, 1929. 167 pages. \$2.50.

Guidance and Education of Prospective Junior Wage Earners. By Frederick M. Trumbull. John Wiley & Sons, Inc., New York, 1929. 298 pages.

Incomes and Living Costs of a University Faculty. Edited by Yandell Henderson and Maurice R. Davie. Yale University Press, New Haven, Conn., 1928. 170 pages. \$2.00.

Church Finance. By Rev. William H. Leach. Cokesbury Press, Nashville, Tenn., 1928. 224 pages. \$2.25.

Sales Contracts and Forms. Prentice-Hall, Inc., N. Y., 1928. 455 pages. \$7.50.

Survey of Books for Executives

The Labor Movement in the United States 1860-1895. By Norman J. Ware. D. Appleton & Co. New York, 1929. 409 pages.

After patiently prospecting through twenty sterile years preceding the Civil War ("The Industrial Worker": 1840-1860, Houghton Mifflin Co., 1924), Professor Ware has at last struck pay dirt. In his new book he follows the development of the American labor movement through the years of swift change which followed the Civil War and which furnished an impressive overture to that expanding industrialism which has characterized the twentieth century. It was the period when modern factory industry and modern trade unionism were going through their exuberant boyhood together; the period of the Greenbackers and the Farmers' Alliance and the Knights of Labor and the Molly Maguires; the period of the panic of 1873, the great railroad strikes and the Haymarket riots; the period of Uriah Stephens and Terence V. Powderly and Johann Most and young Sam Gompers. Even a less skillful labor historian scarcely could have failed to make an interesting book out of this wealth of material.

Professor Ware picks up the threads of the embryonic labor movement in the early post-war years when a few isolated organizations began to grope about for a basis of consolidation. He traces the story through the rise and fall of the National Labor Union, the International Industrial Assembly, and other mushroom organizations that preceded the Noble and Holy Order of the Knights of Labor. It is to

the last-named organization that the bulk of the story is devoted. In fact, the book might appropriately have been entitled a history of the Knights of Labor. The author has probed deeply into contemporary records to piece out an intelligible account of the amazing growth and equally startling decline of the extraordinary organization which in some respects has marked the high-water line of the American labor movement.

In Professor Ware's pages the Knights of Labor assume a somewhat clearer outline than in most earlier histories. Nevertheless, a reader retains the impression of an organization contradictory, changeable, and in some respects defying both explanation and analysis. The Order was radical, yet much of the radicalism of the 1870's has become commonplace in the 1920's. It officially opposed strikes, but its growth in the years preceding 1886 was largely due to a series of labor disturbances for which it received the credit or blame. It attained a membership of over 700,000 at a time when the germs of decay already were working toward its decline and downfall.

Although Uriah S. Stephens is considered more than any one man to be the founder of the Knights of Labor, its guiding spirit during its most prosperous periods was Terence V. Powderly. Powderly would have been a strange figure as a labor leader at any time. He was doubly so in a turbulent period when industrial disputes were settled largely by strong-arm methods. He was a mild-mannered, under-sized man, characterized by his de-

votion to temperance, his aversion to strikes, and his habit of writing letters filled with scathing sarcasm and bitter witticisms—a habit which cost him dearly on many occasions. "Powderly," says Professor Ware, "did not look like a labor leader nor did he act like one. He acted more like Queen Victoria at a National Democratic Convention." * * * This then was the man who led the Knights of Labor, or was led by them, from 1879 to 1893. He was a talker, writer, agitator, but lacked executive ability and inclination. He was an introvert where an extravert was needed. His successor as head of the American labor movement, Samuel Gompers, was almost the exact opposite. They could never understand each other and there was distrust on both sides. This explains as much as anything the split which brought into being the American Federation of Labor."

In the years of greatest prosperity for the Knights of Labor its rival and successor appeared in the field. Professor Ware traces the beginning of the American Federation of Labor to a split which started in the cigarmakers' union and which brought into prominence Adolph Strasser and Samuel Gompers. He differs from most other labor historians who believe that the American Federation of Labor of 1886 was merely the reorganization of the Federation of Organized Trades and Labor Unions, formed in 1881. He considers that the earlier Federation had practically disintegrated, and that the convention of 1886 built from the ground up.

In his chapter entitled "The Boycott," Professor Ware advances the interesting theory that class consciousness in American labor reached its high point in the 1890's, and that since then it has been on the decline. He says, "The Industrial Revolution had created what seemed to be, on the surface, a social situation out of which 'class' had emerged, and it was this that made the boycott successful. There were workingmen's commodities and there were middle and upper class com-

modities. Beer, cheap cigars, rough, ready-made clothing, cheap grades of house furnishings, were made for workingmen and sold in workingmen's districts. A boycott of beer, cheap cigars, or other workingmen's commodities meant something. It was capable of ruining the manufacturer or the recalcitrant retailer.

"Now there is no beer (sic), nearly everyone smokes cheap cigarettes, and while there is cheap clothing and expensive clothing, house furnishings, etc., there is no workingmen's clothing or furnishings. America has gone through a social revolution in which a large, consumer middle class has been created in place of the large workingmen's class that existed in the eighties. A dress is bought in Paris for \$300, copied to sell at \$65, copied again to sell at \$30, and still again at \$15. Superficially it is the same dress worn on Park Avenue one day and Grand Street the next. The communists may rave as they please, but it is quite impossible to be as class conscious in silk stockings as in cotton, and the use of women's garments as illustration suggests one reason for the revolution that has taken place in America in the last thirty years."

It is earnestly to be hoped that Dr. Ware will continue his studies in American labor history and that we soon may see the publication of a third volume bringing the narrative down into the twentieth century.

EDWARD S. COWDRICK.

Packages That Sell. By Richard B. Franken and Carroll B. Larrabee. Harper & Bros., New York, 1928. 302 pages. \$5.00.

In "Packages That Sell" the authors have made a very real contribution to the cause of good packaging by reducing the problem to a common-sense line of thought with means provided to insure against unwarranted personal opinion.

The completeness of treatment at first rather disconcerts the reader by giving the impression that rather arbitrary rules of

conduct have been laid down that might react to make difficult a nice approach to any problem in hand. The authors have, however, piloted themselves around this hazard. The common-sense viewpoint is kept at all times as more important than the dogmatic statements of findings as facts.

In their discussion of the psychology of color the reviewer found solace for a mind made turbulent by many discussions of this question.

Messrs. Franken and Larrabee have explained that while certain individuals may react in certain established ways to certain colors, those very reactions are dependent on prior experiences. They state that no blanket of philosophical or psychological meaning will cover color use, but each color must be judged in relation to its place, utility, and antecedents.

The book is a storehouse of current information and findings in all phases and departments of packaging. The best quality of the book is the realization which its authors show that this is not the last book that will be written on this important subject. They have allowed room in most of the cubby holes in this storehouse for more worthwhile study and research.

J. E. ALCOTT,

Art in Industry Adviser,

Associated Industries of Massachusetts.

Testing Intelligence and Achievement.

By Albert J. Levine and Louis Marks.
Macmillan, New York, 1928. 399 pages.

Obviously a text-book and planned primarily for the use of teachers and students of education, this volume has the directness and organization to be useful as a handbook on the history, development, and present status of intelligence tests.

From the outset the authors take a distinctly practical attitude toward their subject; they ride no hobbies and have no wares to cry on the market. The whole work, although centered upon the school child, presents a readable and sane résumé

of practical achievement in intelligence tests.

The bibliographies presented at the end of each chapter are particularly complete and significant.

Sales Management Fundamentals. By Richard C. Hay, Harper & Bros. New York, 1929. 249 pages. \$3.50.

The author of this book brings to his task an unusual wealth of experience and observation in the management of a sales force and in sales training and research. He draws very effectively upon these experiences and for this reason the book, which deals with sales management fundamentals rather than details, has about it, nevertheless, a very practical air. The author recognizes the impossibility of covering adequately, in a single volume, the whole subject of sales management, and confines himself, therefore, to certain subjects which he considers to be of special importance because of their present interest and future significance to sales managers.

The author views broadly the work of the sales manager, and it is some of the divisions of his work which some people would look upon as incidental that he selects for greatest emphasis. The work of the sales manager he describes as falling under three heads: operation, planning, and training. Planning and training have been given too little attention in the past but in the performance of these functions lies the best prospect for an improvement in the administration of sales. In the present stress upon planning there is an application of one of the fundamentals of scientific management—the separation of planning and execution. The old idea that the practitioner himself was best able to plan his work has been slow to die in this field. Probably this separation of function can never go as far in the management of a far-flung sales organization as in the more compact and closely-knit production organization, but it seems to be the opinion of the author that much can

be done in this direction. Among the subjects which receive special attention are the selection and training of new salesmen, the training of senior salesmen, the sales manual, stimulating salesmen's results—largely by compensation and quota plans—sales promotion, sales research, and the problem of resales; i.e., dealer aid.

The treatment of the individual subjects, such as selection of salesmen, compensation, and research, could all be criticised on the ground of inadequacy, but when the book is viewed in its entirety it presents a well-rounded and balanced treatment. In its large outline the book is well-planned as to logical sequence. In detail it is often repetitious. A further minor criticism arises from the author's fondness for logical classification, which often leads him dangerously close to the pedantic style thought to characterize the work of college professors. The book is free from one characteristic which unfortunately marks many of the books in this field; i.e., lengthy quotations from certain popular business magazines. This book is not a scissors and paste product; it is honestly written from the experience, observation, and contemplation of the author. It is a worthwhile addition to the literature of an important field of management.

C. E. GRIFFIN, *Dean,*
School of Business Administration,
University of Michigan

Pastures of Wonder. By Cassius Jackson Keyser. Columbia University Press, New York, 1929. 208 pages. \$2.75.

If you believe that the kind of lives we lead depends upon the kind of thinking we do, then you will not want a more competent and gentle shepherd than Dr. Keyser to guide your intellectual grazing and fattening in the fields of science and mathematics.

If, on the other hand, you believe that a successful engineer needs but a reference to a mechanical pocket book to solve his problems, like a housewife consulting the recipes of her cookbook, you had bet-

ter save the price of "Pastures of Wonder," for you will need the cash to pay for the mistakes you are bound to make.

But even if a man of practical mind is satisfied with ready-made and canned knowledge, he must at least be able to define the terms that he or his informer uses in transmitting some highly practical advice.

Suppose your child quotes to you a poem:

"All mimsy were the borogoves
And the mome raths outgrabe."

Has it content? It has if, and only if, meanings have been assigned to the terms: "mimsy," "borogoves," "mome raths," and "outgrabe," for in themselves these terms, like any words in our vocabulary, have no more significance than have the mathematical symbols x , y , z , n , w , t , etc.

Strange as it may seem at first, Keyser discloses that the term "Science" has never been defined. "It is true," he says, "that various aspects of what is commonly called science or scientific work or scientific activity have often been more or less aptly described. But description and definition are radically different things. . . ."

Hence the question which the author puts to himself and discusses in this book is: "What ought the term Science to signify?"

Since science is concerned with the make-up of the actual world, the propositions propounded by science are "categorical," i.e., they assert outright that such-and-such is the case.

Inasmuch as mathematics is never concerned with any definite subject-matter, but merely with the world of possibility, the mathematical propositions are "hypothetical," asserting that if such-and-such supposable things were actual, then such-and-such other things would of necessity be so, too.

"Thus," says Keyser, "it becomes evident that, corresponding to the two great propositional types, the knowledge-seeking activity of man presents two grand divisions: quest of categoricals wherewith to

describe the actual world, and quest of hypotheticals wherewith to describe the world of possibility."

This book is closely akin to such other works of Mr. Keyser's as: "Human Worth of Rigorous Thinking," "Mathematical Philosophy," "Lectures for Educated Laymen," "Thinking About Thinking," and others; but it brings to focus the larger problems, and it treats them with serenity and loftiness rather than with the ardor and beauty of his earlier works.

To the engineer, and even more to the manager, who equally depends in his daily work upon the gifts of science and upon the method of mathematical thinking, the light of the double star—science and mathematics—as shed in this book, seems indispensable for any intelligent layout of his daily course, however humble and specialized it may be.

WALTER N. POLAKOV,
Walter N. Polakov & Company, Inc.

Types of Business Enterprise. By Maurice Condit Cross. Prentice-Hall, Inc. New York, 1928. 338 pages. \$5.00.

"Types of Business Enterprise" contains interesting and worthwhile information not only for students but for anyone connected with a large corporation, whether an executive or a new employee wishing to become an executive.

The purpose of the author, to give a comprehensive picture of present day business in this country, is well accomplished. Part I, "Simple Types of Enterprise," begins with a short chapter on "Business Enterprise" in general—advantages and disadvantages of having one's own business, a classification of types of business enterprise, etc. A brief resumé of the early industrial development of the United States follows. Only one chapter is given to "Partnership Organization," while the discussion of corporations occupies fourteen. This emphasis on the incorporated form of business enterprise is, of course, entirely in accord with the present trend.

As the author points out the limitations on the use of the partnership are such that this form of organization is gradually being superseded by the corporate type, and "only the smaller mercantile, professional and manufacturing enterprises can make use of the partnership form of enterprise at the present time."

In Part II under the heading of "Inter-Relationship Types of Enterprise" the author takes up the development of "big business," agreements and pools, the trustee device and community of interest, the holding company and consolidation. These are all subjects of unusual interest at the present time, and an unprejudiced discussion such as this book presents is worth reading.

Part III, on the "Social Import of 'Big Business,'" is one of the most valuable sections of the book. Particularly important are the paragraphs showing the universality of the present movement, the tendency of present combinations not to be monopolistic in purpose but to work for the good of the public, the consumer, by lowering prices and bettering quality of product. The description of the reasons for the change of the public feeling toward the large corporations as a result of changed ethics and diffusion of ownership is significant.

Perhaps few realize the bearing that the growth of large business units has on the individual, but this is important. It is difficult for a person just entering a large corporation to get an idea of the way it is organized, yet it is necessary for those who wish to make progress in a large corporation to understand the background, the manner of organization, and the various procedures incident to carrying it on. "Types of Business Enterprise" is intended to give just such information, and students, new employees, or executives of corporations who desire to get a better understanding of the set up and development of corporations will find it helpful.

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